

**REMARKS**

**Claims 22 and 23 are objected to because in claim 22 DAO was supposed to be short for disc-at-once as it is described in the specification but in the claim it is misspelled. In claim 23 also there is a similar misspelling of track-at-once (TAO). Appropriate correction is required.**

Claims 22 and 23 are amended to change ‘-at-one’ to ‘-at-once’ as was suggested by the Examiner. Additionally, a similar typo is corrected in claim 17. No new matter is entered. Withdrawal of the objection to the claims is respectfully requested.

**Claims 1-33 are rejected under 35 USC 103a as being unpatentable over Green at al. US 7,117,230 B1 (Green hereinafter) and further in view of Nakai US 6,928,567 B2.**

The applicant respectfully asserts that claims 1-33 should not be rejected under 35 USC 103a over Green at al. and Nakai because, neither Green at al. nor Nakai teach particular features of the present invention, and the difference would not be apparent to a person of ordinary skill in the art. Therefore the combination of Green at al. and Nakai will also not teach the missing features without further inventive process.

Specifically, concerning claim 1, the applicant asserts out that neither Green et al. nor Nakai teach at least the following steps of the present invention:

“(b) determining the write mode of the target track; and  
(c) calculating track capacity of the target track according to its write mode.” (claim 1 – emphasis added)

In the Office action of the 12/03/2007, the Examiner admits that Green et al. do not teach anything about determining the write mode of the target track. In particular, the Examiner stated, “But Green fails to teach specifically about determining the write mode of the target track.” However, the Examiner then states that Nakai teaches four different recording modes “disk-at-once (DAO), track-at-once (TAO), session-at-once (SAO), and

packet writing are possible, col 10 line 65)". This leads the Examiner to conclude, "Therefore, the combined teaching of Green and Nakai would have rendered obvious to identify track capacity by using the methods of checking for links blocks, determining write mode and finally calculating track capacity according to the write mode being used."

5           However, the applicant respectfully disagrees. It is firstly noted that the Examiner did not specifically point out any motivation for why a person of ordinary skill in the art would combine the teachings of Green et al. and Nakai in the way described to result in the present invention. In fact, the applicant respectfully disagrees that a person of ordinary skill in the art would combine Green et al. and Nakai as the Examiner stated. Applicant points out that

10   Green et al. are concerned with how to quickly perform writing operations including automatic initialization on a rewritable optical disc. This is not related to the above claimed feature of the present invention that the track type is first determined and then track size is calculated according to the track type. Additionally, Nakai is concerned with different write modes and how to choose between them. There is no mention by Nakai of determining the

15   track capacity before performing a write operation. Because neither Nakai nor Green et al. teach determining the write mode of the target track and then calculating the track capacity of the target track according to its write mode, as is claimed in the present invention, applicant asserts that a combination of Green et al. and Nakai would not result in these steps without further inventive process. That is, the missing steps of determining the write mode of the

20   target track and calculating the track capacity of the target track according to its write mode would not be obvious to a person of ordinary skill in the art without further inventive process. In particular, a person of ordinary skill in the art, after considering the teachings of Green et al. and Nakai would continue to determine the track capacity of the target track without considering the write mode of the target track. The reason is that neither Green et al. nor

25   Nakai teach or suggest a reason for calculating the track capacity of the target track according to its write mode. It would also not be common knowledge, as is apparent from the fact that neither Green et al. nor Nakai teach such operation.

For at least the reason that two steps as claimed in claim 1 are not taught by the cited

references of Green et al. and Nakai, and because the difference between the cited references and the present invention would not be apparent to a person of ordinary skill in the art, the applicant asserts that claim 1 should be found allowable over the cited references of Green et al. and Nakai. Similar arguments also apply to independent claims 16. Claims 2-15 and 17-25  
5 are dependent upon claims 1 and 16, respectively, and should be allowable for at least the same reasons. Reconsideration of claims 1-25 is respectively requested.

Concerning independent claim 26, the applicant first points out that the Examiner did not rely on the Nakai reference in the rejection and therefore it appears that the Examiner  
10 mistakenly quoted 35 USC 103a as the rejection basis. In fact, the Examiner is contending that claim 26 of the present invention is fully anticipated by Green et al. and should therefore have used 35 USC 102 for the rejection basis. With this in mind, the applicant respectfully argues against the rejection of claim 26 as follows.

Applicant respectfully asserts that Green et al. does not teach at least the following two  
15 steps of the present invention:

- “(a) setting actual capacity of a target track as the size of the target track excluding its pre-gap when the write mode of the target track is a first type; and
- 20 (b) setting actual capacity of the target track as the size of the target track excluding its pre-gap and at least a part of link blocks when the write mode of the target track is a second type;” (claim 26 – emphasis added)

The Examiner stated that so-called “method 1” and “method 2” by Green et al. are  
25 equivalent methods to the above two steps of the present invention. However, the applicant respectfully disagrees. In particular, both method 1 and method 2 are taught by Green et al. as “Method 1 addressing of a track on CD media” (col 14, line 51) and “Method 2 addressing of a track on CD media” (col 15, line 13). Applicant firstly notes that addressing a track on the

CD media is not equivalent to “setting actual capacity of the target track”, as is claimed in the present invention.

5        Additionally, Green et al. does not exclude the pre-gap track of the target track, as is claimed in the present invention. In fact, Green et al. teach exactly the opposite and include the pre-gap. See col 16, lines 24-26 stating, “As is known, although a pregap 266 is not user data, it is a multi-track structure that is not mapped out of Method 2 addressing.” The fact that the pregap 266 is including in the addressing range of the track and is not excluded is clearly illustrated by Green et al. in Figure 5 – specifically note pre gap 266 and pre gap 262 within the address range. Additionally, applicant notes that Green et al. disclose equation 1 (col 16, 10    line 65) that shows “the equation to determine a length for the TAO”, which includes the length of the pre gap, and the start address of the pre gap. Because the present invention claims “excluding its pre-gap” for both steps (a) and (b) dealing with the two different track types, and Green et al. clearly does not exclude the pre gap 266 for at least method 2, therefore, the applicant respectfully asserts that Green et al. does not anticipate the present 15    invention. In particular, for both first and second track modes, the present invention as claimed in claim 26 requires excluding the pre-gap of the target track.

For at least the reasons that Green et al. does not teach calculating the actual size of the target track, and because Green et al. teach including the pre gap 266 whereas the present invention excludes the pre gap for both the first and second track types, applicant asserts that 20    claim 26 should be found allowable over the teachings of Green et al. Claims 27-33 are dependent upon claim 26 and should be found allowable for at least the same reasons. Reconsideration of claims 26-33 is respectfully requested.

#### **New Claims**

25        New claims 34-35 being dependent upon base claim 1, new claim 36 being dependent upon base claim 16, and new claims 37-38 being dependent upon base claim 26 are added. No new matter is entered. In particular, all the features of new claims 34-38 are disclosed in original paragraph [0051] as filed.

Concerning the patentability of new claims 34, 36, and 37 with respect to the cited references of Green et al. and Nakai, applicant notes that neither Green et al. nor Nakai teach or suggest determining the write mode of each track of the optical disk during an initialization process when the optical disk is loaded, storing the write mode of each track in a memory  
5 during the initialization process, and then calculating the target track capacity according to the write mode stored in the memory. As is stated in paragraph [0051] of the present invention, such method steps “improve response speed and correctness when the host requests track capacity of any track of the optical disk 60”. Consideration of new claims 34, 36, and 37 is respectfully requested.

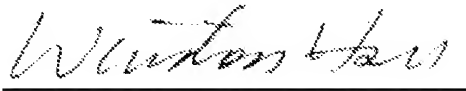
10 Concerning the patentability of new claims 35 and 38 with respect to the cited references of Green et al. and Nakai, applicant notes that neither Green et al. nor Nakai teach or suggest determining the write mode of each track of the optical disk during an initialization process when the optical disk is loaded into the optical disk drive, calculating the track capacity of each track according to the determined write mode during the initialization  
15 process, and storing the track capacity of each track in a memory of the optical disk drive during the initialization process. Again, according to the present invention, such method steps improve the response speed and accuracy when the host requests the track capacity of a target track. Consideration of new claims 35 and 38 is respectfully requested.

20 **Conclusion:**

Thus, all pending claims are submitted to be in condition for allowance with respect to the cited art for at least the reasons presented above. The Examiner is encouraged to telephone the undersigned if there are informalities that can be resolved in a phone conversation, or if the Examiner has any ideas or suggestions for further advancing the  
25 prosecution of this case.

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Sincerely yours,



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- 10 Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)